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P88-9

WHY wait until your electric appliances and equipment get out of order, burn out, blow out or destroy a fuse? Check them over before any of those things happen . . . head off trouble before it starts. Your repair man will help you on big jobs—but there are many you can do yourself, with a pliers, hammer, screwdriver and other basic tools. You'll find that simple repairs on electrical equipment are about as easy to make as patching a window-shade, hanging a curtain, drying a dish, or cleaning a rug. Read these pages to find out how it's done.



You can make

**THESE ELECTRICAL
REPAIRS**





It's easy to install a new plug on your old but serviceable cords, as shown above.

CORDS

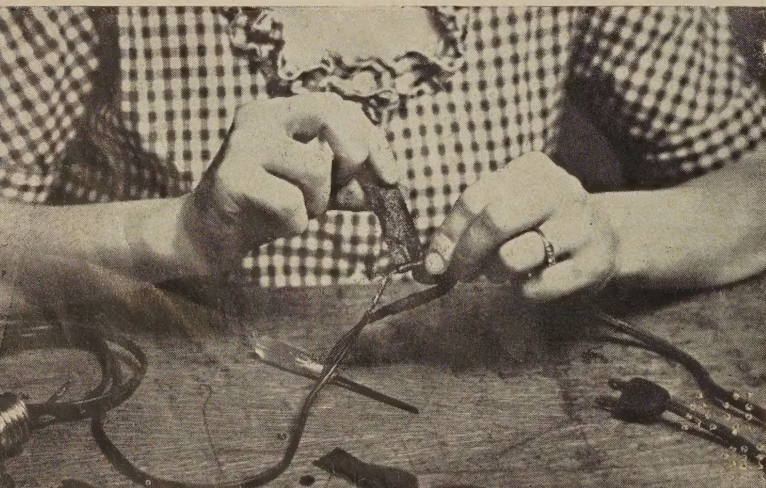
Because electricity travels over extension cords, they are essential to your home electric distribution system. They have two parts—cords and plugs.

Look for worn places in the cord. Where only the fabric covering is worn through, wrap friction tape around the cord. If the inside insulation is worn, trim off rough edges of the old insulation and tape each of the two wires separately. Begin just above the break and wrap spirally, overlapping each turn about a quarter of an inch until the damaged area has been covered. Then tape the two repaired wires together in the same manner.

Joining Two Cords—Two or more *short* extension cords can be joined *temporarily* by splicing. Clip off worn ends of the wire and strip the outer insulation about four inches back on each wire. Then bare the ends of the four wires about three inches back, make sure they are clean for soldering. Next, twist the ends of each wire separately to make them easy to handle. Twist the two pair of opposite wires together, wrapping at least four times. Pull on the cord slightly so that the two connected wires will be the same length. Heat the joints with a clean soldering iron, applying enough solder to fill the spaces between the wires. Tape (insulation tape) each wire separately so that no metal shows and then tape (friction tape) both joined wires together as one cord.

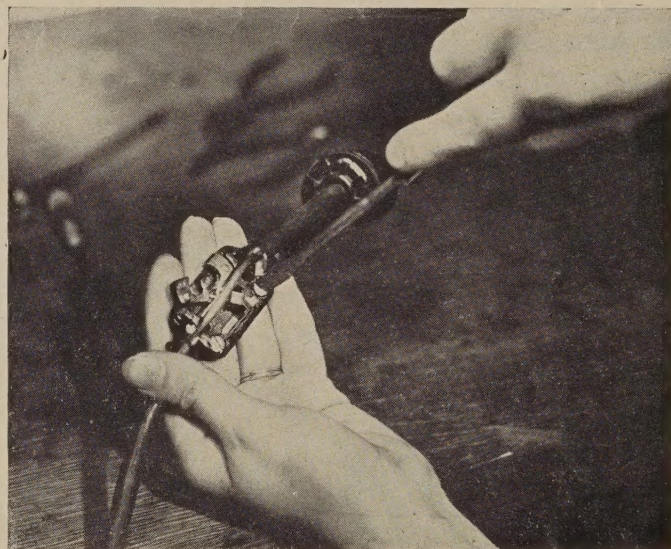
Installing Cord Plugs—Check the two-prong male plug. If it is damaged, replace it. If insulation on connecting

This picture shows the proper way to wind tape on wires after splicing—tape each wire separately, then both together.



wires is worn, cut off the ends of the wires about two inches back and reconnect as follows:

Loosen the binding screws and remove the cord from the old plug. Cut off worn ends of the cord and thread through the plug. Make a little collar around the cord about three inches from the end, by winding a narrow piece of friction tape around the wire. This will prevent the wires from pulling out of the plug if the cord is jerked accidentally. Then remove the outer insulation from the collar to the end of the cord. Snug one wire around each prong and binding screw, and cut off extra wire except for about an inch to wrap around the screws. Next, bare



You can put a switch right on a cord, to substitute for a broken switch on the appliance, or to give added convenience.

the ends of the wire about a half inch back and twist into a solid tip. Place the tip under the terminal screw, binding it in the direction the screw will turn when tightened, and tighten the screw. Then fasten the other wire to the second terminal in the same way.

Attach the female cord connector to the other end of the cord. Take the plug apart by removing the two bolts in the face. Remove the insulation from the ends of the cord, thread through the plug, wind the tape collar and attach one wire to each terminal as outlined above.

SOCKETS

Before working on the socket, look for defects in cords and plugs. Make sure the socket is not connected to a live outlet. To take a brass socket apart, push with thumb or insert a screwdriver near the socket cap at point marked "press"; unscrew the cap of hard rubber socket from casing. To install a new socket, loosen the binding screws and pull the cord through the socket cap. Then wrap a tape collar around the cord as in "Plugs," and proceed the same way.

Replacing a Pull Chain—First remove the socket casing

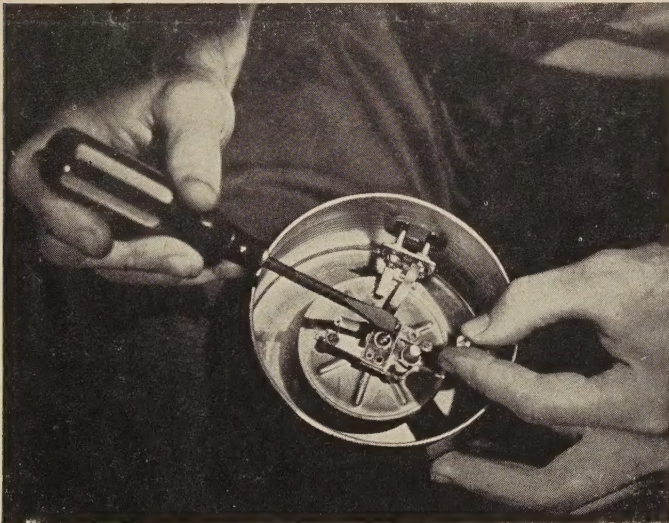
No Trick to t

and take out any parts of broken chain. Thread the chain through the socket eye, allowing it to fall in the channel. If necessary, pinch the sides of slit together to hold the link. Pull on the chain to see if the switch will snap on and off. Replace the insulating shield and casing before connecting.

The Cord Switch—It's easy to make an appliance more convenient for use by putting in a switch *on the cord*—or this switch may substitute for a damaged appliance switch.

First, take the switch apart by removing the bolts in the side or springing metal rings at the end. Locate the place on the cord where you wish to install the switch and remove outer insulation for a distance about an inch less than the length of the switch. Cut one of the exposed wires and place the uncut or "through" wire in one channel in the switch. Measure the length of wire needed to run through the other channel to the two binding screws. Cut off surplus wire and bare the tips for connecting. Loop the ends of one wire around the nearest binding screw and tighten. Connect the other wire to the other binding screw in the same way. Make sure the wires lie in their proper channels, then reassemble the switch.

If the cord switch supplements a faulty switch on an appliance, the appliance switch should be wired around. This is done by taking apart the *appliance switch* and fastening a short wire from one switch binding screw to the other without removing the original connections. If the appliance switch has more than "off" and "on" positions—that is, if it is a three- or four-way switch—a wiring repair man can show you how to block it out.



Here's the proper way to replace a blown-out fuse in the base of your coffee-maker. Some fuses are all metal, others have glass cases.

APPLIANCES

Certain appliances require more detailed repairs than others, and most appliances have parts that require expert repair. However, here are some suggestions:

These Repairs



While making repairs on your grill or other appliances, you can clean metal surfaces, too.

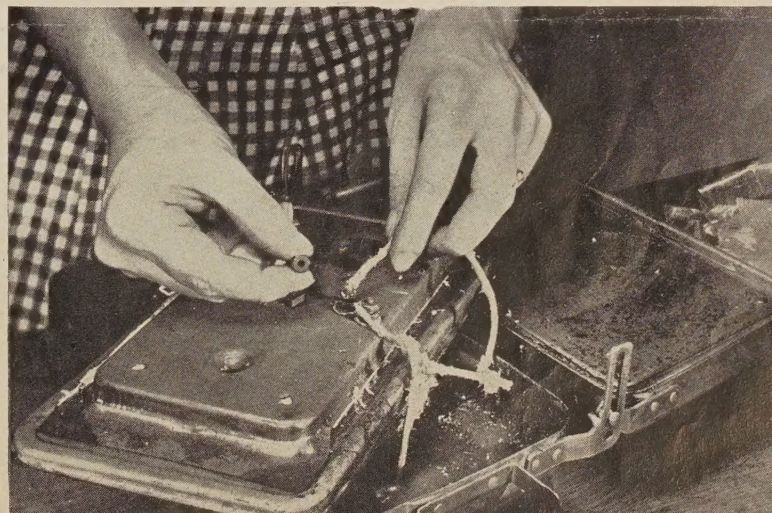
Irons—To check the thermostat—the device which turns the current on or off to maintain the desired heat—connect the iron, set the control at a given temperature, and check the length of time for it to click off, then for it to click on again. If the iron keeps getting hotter and the thermostat does not work, take the iron to a service man.

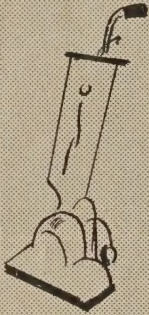
If the iron has terminals for a service plug attachment, remove any burnt or pitted places on the prongs by rubbing with fine sandpaper until they are smooth and bright. Straighten and tighten the terminals if necessary. To replace a badly damaged terminal, unscrew the bolts holding the iron shell to the base. Remove the old terminal, after noting how the parts fit into place, especially the arrangement of insulating strips and washers. Insert the new terminal, then set all parts tightly and make all connections carefully so that wire does not touch the metal frame at any point.

Toaster—If the ends of the heating element are badly worn or burned, make new connections. Loosen the binding screws and remove broken pieces of the element. After scraping and sandpapering the ends of the element, fit them under the binding screws and tighten. Avoid stretching the element or using more of it than necessary to make the connections.

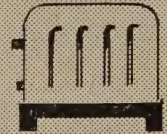
If the element is broken, join the ends with a very small round-headed bolt or nut. Scrape the broken ends of wire until bright and place between the nut and bolt head, one on each side, with the ends pointing in the direction the bolt turns as it is tightened. Reassemble the parts, making sure the repair bolt does not touch the toaster frame. Test by plugging into a convenience outlet.

Replace frayed or worn-out wires on your appliances—be sure to tighten screws as you replace them.

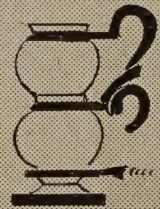




Hotplate—If a hotplate does not heat, check the cord for worn or frayed parts. In an open coil hotplate, check the screws at the end of the heating element to make sure they are tight and have not been burned. Repairs may be made as outlined for toaster elements. If a unit burns out, a new one should be installed by connecting the ends to the binding screws, allowing the coils to fall naturally into the element channels. The enclosed type element may be replaced with a new one.



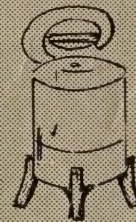
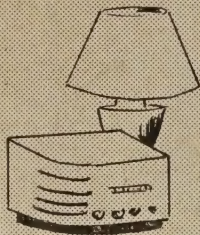
REPAIRS listed on these pages are by no means all those that need to be made on electrical appliances in the home, but they are typical of adjustments in your electrical distribution and appliance system. More complex repairs on the type of equipment listed should be handled by a competent repair man.



Many suggestions for care and, in some cases, repair of electrical appliances are contained in the following REA publications:



- Care and Use of Your Electric Range*
- Care and Use of Your Electric Iron*
- Care and Use of Your Electric Hot Plate*
- Care and Use of Your Lighting Equipment*
- Care and Use of Your Electric Refrigerator*
- Care and Use of Your Vacuum Cleaner*
- Care and Use of Your Washer*
- Care and Use of Your Small Electric Appliances.*



Ask your Co-op for copies of these publications or write direct to the REA, St. Louis 2, Mo.

**RURAL ELECTRIFICATION ADMINISTRATION
U. S. DEPARTMENT OF AGRICULTURE
SAINT LOUIS 2, MISSOURI**

